REMARKS

Claims 1 through 10 are pending in the present application. Claims 1, 7, 8, 9 and 10 are independent claims and claims 2 through 6 depend from claim 1.

In the Office Action, the specification at page 3, line 14 has been objected to as having a minor informality with regard to correct spelling of the term "Michelson". Applicants have amended and corrected the specification at page 3, line 14. Reconsideration of this objection to the specification is respectfully requested.

In page 2 of the Office Action, claims 1, 2 and 5 have been rejected under 35 U.S.C. sec. 102(b) as being anticipated by PCT Application Publication No. WO 98/36252 to Kringlebotn (hereinafter "Kringlebotn"). Applicants respectfully traverse this rejection on the grounds that Kringlebotn neither expressly nor inherently describes all of the elements set forth in independent claim 1.

Claim 1 provides for a wavelength determining unit. The wavelength determining unit includes a wavemeter unit for determining a first wavelength values $\lambda 1(t)$ having a wavelength variation over time, an absolute-measuring unit for determining second wavelength values having a wavelength variation over time and an evaluation unit for providing corrected wavelength values having a wavelength variation over time.

Claim 1 also teaches that the absolute-measuring unit has unambiguous wavelength properties at known absolute wavelength values and determines second wavelength values $\lambda 2(t)$ having a wavelength variation over time. The evaluation unit receives the determined first $\lambda 1(t)$ and second $\lambda 2(t)$ wavelength values and provides corrected wavelength values $\lambda 1'(t)$ having a wavelength variation over time.

Kringlebotn teaches a broadband light source, a tuneable optical filter, a first coupler and a second coupler. A first part of the light from the broadband light source is transmitted through the tuneable optical filter to the first coupler. The first part of the light from the broadband light source is then transmitted through a first detector that outputs a signal to a signal processing unit. A second part of the light from the broadband light source passes through the second coupler and then to a fiber Bragg grating (see page 6 lines 29). According to page 6, lines 25 through 26 of Kringlebotn, "the FBG 5, [filter or fiber Bragg grating] with a known wavelength, provid[es] an accurate wavelength reference".

Thereafter, the second part of the light of the broadband light source is reflected back through the second coupler and then to a second detector. The second detector then outputs an electrical signal representing this second part of the light to the signal processing unit.

According to the specification at page 8, lines 7 through 9, "[t]he detector signals from detector 10 and 7 are simultaneously sampled, processed and compared in a signal processing and data presentation unit 11, providing accurate and repeatable information on the Bragg wavelengths of the FBGs [the filter or fiber Bragg grating]". Again at page 8, lines 27, the detectors, "provide accurate and repeatable information on the Bragg wavelengths of the FBGs to the signal processing unit".

With regard to the recital of claim 1, Applicants have not found any teaching in Kringlebotn for an evaluation unit providing corrected wavelength values having a wavelength variation over time. Kringlebotn specifically describes that the system described therein is for providing accurate, repeatable information on the Bragg wavelengths of the fiber Bragg grating, a value of the

reference. Kringlebotn does not describe the evaluation unit providing corrected wavelength values having a wavelength variation over time as claimed in claim 1.

Furthermore, Kringlebotn does not describe providing corrected wavelength values having a wavelength variation over time. In contrast, Kringlebotn describes a system that provides information on the Bragg wavelengths of the fiber Bragg grating. This information on the Bragg wavelengths although repeatable is not provided over time. Accordingly, Applicants submit that Kringlebotn does not describe providing a corrected wavelength values having a wavelength variation over time, as recited in claim 1.

Still further, Kringlebotn describes information on a reference value or the Bragg wavelengths of the fiber Bragg grating. Apparently, this reference value has an error that Kringlebotn seeks to minimize. In contrast, claim 1 teaches an absolute measuring unit having unambiguous wavelength properties at known absolute wavelength values. Accordingly, Kringlebotn does not teach an absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values, as recited in claim 1.

Applicants respectfully submit that Kringlebotn does not expressly or inherently describe all of the elements of claim 1. Reconsideration and withdrawal of the section 102(b) of claim 1 are respectfully requested.

Claims 2 and 5 depend from independent claim 1. Accordingly, it is respectfully submitted that Kringlebotn does not anticipate claims 2 and 5 as these claims depend from claim 1 for at least the reasons discussed above in support of claim 1. Applicants respectfully state that claims 1, 2 and 5 are all now in condition for allowance.

In page 3 of the Action, independent claims 7, 8 and 9 were all rejected under 35 U.S.C. sec. 102(b) as being anticipated by Kringlebotn. Each of claims

7, 8 and 9 include the recitals of providing corrected wavelength values having a wavelength variation over time, similar to claim 1 as described above. As such, Kringlebotn does not anticipate claims 7, 8 and 9 for reasons similar to that argued with regard to claim 1.

In page 4 of the Action, claims 3, 4 and 6 were rejected under 35 U.S.C. sec. 103(a) as being unpatentable over Kringlebotn. Claims 3, 4 and 6 depend from independent claim 1. In response, Applicants submit that the cited and relied upon Kringlebotn does not support a prima facie rejection of obviousness under 35 U.S.C. sec. 103(a). Applicants submit that Kringlebotn neither describes nor suggests claims 3, 4 and 6. Applicants respectfully traverse this rejection on the grounds that (a) there is no disclosure, suggestion or motivation in Kringlebotn for the modification argued by the Office, and (b) Kringlebotn does not render applicants' claimed invention obvious.

As mentioned above, independent claim 1 teaches an evaluation unit for providing corrected wavelength values having a wavelength variation over the time. Kringlebotn does not suggest or describe an evaluation unit for providing corrected wavelength values having a wavelength variation over the time. In contrast, Kringlebotn teaches that the first detector and the second detector outputs signals to a signal processing unit that are simultaneously processed for providing accurate and repeatable information on the Bragg wavelengths of the fiber Bragg grating.

Therefore, Applicants submit that the cited and relied upon Kringlebotn neither describes nor suggests the evaluation unit for providing corrected wavelength values having a wavelength variation over the time as claimed by Applicants in claim 1.

Claims 3, 4 and 6 depend from claim 1. It is respectfully submitted that these claims are also patentable for at least the reasons stated above for claim 1.

Thus, reconsideration and withdrawal of the rejection of claims 3, 4 and 6 are respectfully requested. Accordingly, withdrawal of the 35 USC 103(a) rejection of claims 3, 4 and 6 are respectfully requested.

In page 4 of the Action, independent claim 10 was rejected under 35 U.S.C. sec. 103(a) as being unpatentable over Kringlebotn. In response, Applicants submit that the cited and relied upon Kringlebotn does not support a prima facie rejection of obviousness under 35 U.S.C. sec. 103(a) of claim 10. Applicants submit that Kringlebotn neither describes nor suggests claim 10. Applicants respectfully traverse this rejection on the grounds that (a) there is no disclosure, suggestion or motivation in Kringlebotn for the modification argued by the Office, and (b) Kringlebotn, without more, does not render applicants' claimed 10 obvious.

With regard to independent claim 10, claim 10 provides a software product for executing a method for determining the wavelengths of a plurality of successive optical signals. The method of claim 10 has the step of providing corrected wavelength values $\lambda 1'(t)$ based on a comparison of a determined first and a second wavelength values over time.

Kringlebotn does not describe or suggest a method having the step of providing corrected wavelength values $\lambda 1'(t)$ based on a comparison of a determined first and a second wavelength values over time. In contrast, Kringlebotn describes providing information on the Bragg wavelengths of the fiber Bragg grating. It is not seen from a review of Kringlebotn where Applicants' step of providing corrected wavelength values $\lambda 1'(t)$ having a wavelength variation over time, as claimed in claim 10, is described or suggested.

Further, it is not seen from a review of Kringlebotn where Applicants' step of providing corrected wavelength values $\lambda 1'(t)$ having a wavelength variation over time based on a comparison of the determined first $\lambda 1(t)$ and second $\lambda 2(t)$

wavelength values is described or suggested. Thus, reconsideration and withdrawal of the 35 USC 103(a) rejection of claim 10 is earnestly solicited.

In view of the foregoing, Applicants respectfully submit that all of claims 1 through 10 patentably distinguish over the cited and relied upon references. Thus, reconsideration and withdrawal of the 35 U.S.C. sec. 102(b) and 103 rejection of the claims are respectfully requested. Accordingly, Applicants respectfully request favorable consideration and that the application be passed to allowance.

Attached hereto is a marked up version of the changes made to the claims by current amendment. The attached page is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE**".

Respectfully Submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Application, Serial No. 09/922,115

IN THE SPECIFICATION

Please replace the paragraph commencing at page 3, line 15 with the following new paragraph:

---A preferred embodiment of the wavemeter unit makes use of the interferometric principle, such as the Fizeau, [Michelsen] Michelson or Fabry-Perot interferometer or uses e.g. a combination of different etalons (which can be also realized based on polarization effects) as disclosed in detail in the aforementioned EP-A- 875743. Those interferometric units generally provide a periodic dependency over the wavelength, but exhibit a higher resolution than the units employing wavelengths dependent material properties---.

IN THE CLAIMS

Please amend the claims as follows:

1. (Twice amended) A wavelength-determining unit for determining the wavelengths of a plurality of successive optical signals $\lambda(t)$ having a wavelength variation over time, comprising:

a wavemeter unit adapted for determining first wavelength values $\lambda 1(t)$ having a wavelength variation over time for the optical signals $\lambda(t)$,

an absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values, and being adapted for determining second

wavelength values λ2(t) having a wavelength variation over time as such of the known absolute wavelength values covered by the optical signals λ(t), and

an evaluation unit adapted for receiving the determined first λ1(t) and second λ2(t) wavelength values and for providing corrected wavelength values λ1'(t) having a wavelength variation over time based on a comparison of the determined first λ1(t) and second λ2(t) wavelength values over time.

7. (Twice amended) A measuring unit for measuring an optical characteristic of a device under test [– DUT –], comprising:

a wavelength variable laser source adapted for providing an optical signal λ(t) to the [DUT] device under test, the optical signal λ(t) having a wavelength variation over the time;

a wavelength-determining unit adapted for receiving the optical signal λ(t) and determining wavelength values λ1(t) thereof over the time, said wavelength determining unit comprising a wavemeter unit adapted for determining first wavelength values λ1(t) having a wavelength variation over time for the optical signals λ(t), an absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values, and being adapted for determining second wavelength values λ2(t) having a wavelength variation over time as such of the known absolute wavelength values covered by the optical signals λ(t), and a first evaluation unit adapted for receiving the determined first λ1(t) and second λ2(t) wavelength values having a wavelength variation over time and for providing corrected wavelength values λ1'(t) having a wavelength variation over time based on a comparison of the determined first λ1(t) and second λ2(t) wavelength values;

a receiver for receiving a signal response on the optical signal $\lambda(t)$ provided to the [DUT] device under test; and

a second evaluation unit receiving the signal response and the thereto corresponding determined wavelength values $\lambda 1'(t)$ having a wavelength variation over time.

8. (Twice amended) A measuring unit for measuring an optical characteristic of a device under test [– DUT –], comprising:

a wavelength variable laser source adapted for providing an optical signal $\lambda(t)$ to the [DUT] device under test, the optical signal $\lambda(t)$ having a wavelength variation over the time,

a wavelength-determining unit adapted for receiving the optical signal $\lambda(t)$ and determining relative wavelength values $\lambda 1(t)$ having a wavelength variation over time and absolute wavelength values $\lambda 2(t)$ thereof over the time,

a receiver for receiving a signal response I(t) on the optical signal $\lambda(t)$ provided to the [DUT] device under test, and

an evaluation unit receiving the signal response of the receiver and thereto calculating the corresponding wavelength values λ 1'(t) having a wavelength variation over time out of the wavelength values $\lambda 1(t)$ and $\lambda 2(t)$ from the wavelength-determining unit resulting in a spectral response $I(\lambda)$ of the [DUT] device under test.

9. (Twice amended) A method for determining the wavelengths of a plurality of successive optical signals $\lambda(t)$, comprising:

determining first wavelength values $\lambda 1(t)$ having a wavelength variation over time for the optical signals $\lambda(t)$, using an absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values for determining second wavelength values $\lambda 2(t)$ having a wavelength variation over time as such known absolute wavelength values covered by the optical signals $\lambda(t)$, and

providing corrected wavelength values $\lambda 1'(t)$ having a wavelength variation over time based on a comparison of the determined first $\lambda 1(t)$ and second $\lambda 2(t)$ wavelength values.

10. (Twice amended) A software product, stored on a data carrier, for executing a method for determining the wavelengths of a plurality of successive optical signals $\lambda(t)$, when run on a data processing system such as a computer, said method comprising:

determining first wavelength values $\lambda 1(t)$ having a wavelength variation over time for the optical signals $\lambda(t)$, using an absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values for determining second wavelength values $\lambda 2(t)$ having a wavelength variation over time as such known absolute wavelength values covered by the optical signals $\lambda(t)$, and

providing corrected wavelength values $\lambda 1'(t)$ having a wavelength variation over time based on a comparison of the determined first $\lambda 1(t)$ and second $\lambda 2(t)$ wavelength values.